



Backend 5.1

CTI API'S

Computer Telephony Integration (CTI)

This group of APIs enable CTI (Computer Telephony Integration) functionality to be able to control end-user calls. The APIs are authenticated using api tickets for Call Control (CALL_CONTROL) and also requires an end-user Cloud CTI API license.

The **Call Control API** enables controlling of calls for a user. The API requires that the end-user has the license for Cloud CTI API. Use the Call Control API to:

- Make a call from a device
- Answer a ringing call
- Hold a call
- Resume a held call
- Alternate call
- Park a call
- Pick up a SIP call
- Mute a call
- Unmute a muted call
- Move a call to another device
- Transfer a call to a new destination
- Transfer a call to another call that belongs to the user
- Send DTMF digits
- Add a call to an ad-hoc conference
- Leave an ad-hoc conference
- Remove a participant from an ad-hoc conference
- Terminate a call

Call Control

Hold a call

Put the call on hold. Depending on the configuration of the server, music on hold may be played to the other party.
Authorizations:

[System](#) (Call control) [Bearer](#) (Call control)

Path Parameters

domain	string
required	The domain of the organization
userId	string
required	The user having the call to hold

callId	string
required	The ID of the call to hold

Request Body Schema: application/json

POST URL: <https://telo.lab.digitalisland.co.nz/api/call/control/v1/hold/{domain}/{userId}/{callId}>

Call Control

Resume a held call

Resume a call that previously was put on hold.
Authorizations:

[System](#) (Call control) [Bearer](#) (Call control)

Path Parameters

domain	string
required	The domain of the organization
userId	string
required	The user having the call to resume
callId	string
required	The ID of the call to resume

Request Body Schema: application/json

POST URL: <https://telo.lab.digitalisland.co.nz/api/call/control/v1/resume/{domain}/{userId}/{callId}>

Call Control

Transfer a call to a new destination

Transfer a call to a new destination. The call will be automatically unheld if it is currently on hold.
Authorizations:

[System](#) (Call control) [Bearer](#) (Call control)

Path Parameters

domain	string
required	The domain of the organization
userId	string
required	The user having the call to transfer
callId	string
required	The ID of the call to transfer

Request Body Schema: application/json

stateToken	integer <int64>
	The expected stateToken of the state at the server. If not matching, the request will fail.
blind	boolean
	Default: false
	Indicate if the transferred call should be automatically cleared after the transfer has been initiated
type	string
	Default: "BASIC"
	Enum: "BASIC" "VOICEMAIL" "CAMP_ON" "DIVERSION_BYPASS"
	The extended type of the transfer.
destination	string
required	The target of the transfer. A SIP or tel URI.

POST URL:

<https://telo.lab.digitalisland.co.nz/api/call/control/v1/singlesteptransfer/{domain}/{userId}/{callId}>

Request samples

```
{  
  "stateToken": 487345453,
```

```
"blind": true,  
"type": "CAMP_ON",  
"destination": "tel:+15555"  
}
```

Response samples

```
{  
  "stateToken": 487345453,  
  "callId": "aaa111bbb",  
  "userId": "user@organization.org",  
  "remoteParty": {  
    "partyId": "nathan.hughes@organization.org",  
    "type": "USER_ID",  
    "telUri": "tel:+442528473",  
    "displayName": "Nathan Hughes",  
    "displayNumber": "8473"  
  },  
  "participants": [  
    {  
      "id": "aaa111bbb",  
      "remoteParty": {  
        "partyId": "nathan.hughes@organization.org",  
        "type": "USER_ID",  
        "telUri": "tel:+442528473",  
        "displayName": "Nathan Hughes",  
        "displayNumber": "8473"  
      },  
      "historyInfo": {  
        "subject": "Main Switchboard number",  
        "acdSupport": "+134777",  
        "campOn": false,  
        "initialParty": {
```

```

    "partyId": "nathan.hughes@organization.org",
    "type": "USER_ID",
    "telUri": "tel:+442528473",
    "displayName": "Nathan Hughes",
    "displayNumber": "8473"
  },
  "previousParty": {
    "partyId": "nathan.hughes@organization.org",
    "type": "USER_ID",
    "telUri": "tel:+442528473",
    "displayName": "Nathan Hughes",
    "displayNumber": "8473"
  },
  "previousRetargetReason": "TRANSFERRED"
}
}
],
"conference": false,
"historyInfo": {
  "subject": "Main Switchboard number",
  "acdSupport": "+134777",
  "campOn": false,
  "initialParty": {
    "partyId": "nathan.hughes@organization.org",
    "type": "USER_ID",
    "telUri": "tel:+442528473",
    "displayName": "Nathan Hughes",
    "displayNumber": "8473"
  },
  "previousParty": {
    "partyId": "nathan.hughes@organization.org",

```

```

    "type": "USER_ID",
    "telUri": "tel:+442528473",
    "displayName": "Nathan Hughes",
    "displayNumber": "8473"
  },
  "previousRetargetReason": "TRANSFERRED"
},
"inbound": true,
"status": "RINGING",
"event": "FAILED",
"eventDescription": "Call setup failed with status code 504",
"duration": 0,
"recordable": true,
"recording": true,
"recordingDuration": 0,
"externalRecording": true,
"externalRecordingDuration": 0,
"externalRecordingPaused": false,
"deviceIds": "[+1555555]",
"actions": "[{action: ANSWER, deviceIds: [+1555555]}]"
}

```

Call Control

Transfer a call to another call that belongs to the user

A user having two separate calls can use the transfer method to connect the two parties the user is talking to. The two calls does not need to be active on the same device. Should either of the calls be on hold, it will automatically be unheld as the calls are connected.
 Authorizations:

[System](#) (Call control) [Bearer](#) (Call control)

Path Parameters

domain	string
required	The domain of the organization
userId	string
required	The user having the call to transfer
callId	string
required	The ID of the call to transfer

Request Body Schema: application/json

stateToken	integer <int64>
	The expected stateToken of the state at the server. If not matching, the request will fail.
targetCallId	string
required	The callId of the target call the transferred call should be transferred to.
targetStateToken	integer <int64>
	The expected stateToken of the state of the target call at the server. If not matching the request will fail.

POST URL: <https://telo.lab.digitalisland.co.nz/api/call/control/v1/transfer/{domain}/{userId}/{callId}>

Request samples

```
{
  "stateToken": 487345453,
  "targetCallId": "dd33dxw9",
  "targetStateToken": 832211
}
```

Response samples

```
{
  "stateToken": 487345453,
  "callId": "aaa111bbb",
}
```



```

"userId": "user@organization.org",
"remoteParty": {
  "partyId": "nathan.hughes@organization.org",
  "type": "USER_ID",
  "telUri": "tel:+442528473",
  "displayName": "Nathan Hughes",
  "displayNumber": "8473"
},
"participants": [
{
  "id": "aaa111bbb",
  "remoteParty": {
    "partyId": "nathan.hughes@organization.org",
    "type": "USER_ID",
    "telUri": "tel:+442528473",
    "displayName": "Nathan Hughes",
    "displayNumber": "8473"
  },
  "historyInfo": {
    "subject": "Main Switchboard number",
    "acdSupport": "+134777",
    "campOn": false,
    "initialParty": {
      "partyId": "nathan.hughes@organization.org",
      "type": "USER_ID",
      "telUri": "tel:+442528473",
      "displayName": "Nathan Hughes",
      "displayNumber": "8473"
    },
    "previousParty": {
      "partyId": "nathan.hughes@organization.org",

```

```

    "type": "USER_ID",
    "telUri": "tel:+442528473",
    "displayName": "Nathan Hughes",
    "displayNumber": "8473"
  },
  "previousRetargetReason": "TRANSFERRED"
}
}
],
"conference": false,
"historyInfo": {
  "subject": "Main Switchboard number",
  "acdSupport": "+134777",
  "campOn": false,
  "initialParty": {
    "partyId": "nathan.hughes@organization.org",
    "type": "USER_ID",
    "telUri": "tel:+442528473",
    "displayName": "Nathan Hughes",
    "displayNumber": "8473"
  },
  "previousParty": {
    "partyId": "nathan.hughes@organization.org",
    "type": "USER_ID",
    "telUri": "tel:+442528473",
    "displayName": "Nathan Hughes",
    "displayNumber": "8473"
  },
  "previousRetargetReason": "TRANSFERRED"
},
"inbound": true,

```

```

"status": "RINGING",
"event": "FAILED",
"eventDescription": "Call setup failed with status code 504",
"duration": 0,
"recordable": true,
"recording": true,
"recordingDuration": 0,
"externalRecording": true,
"externalRecordingDuration": 0,
"externalRecordingPaused": false,
"deviceId": "[+1555555]",
"actions": "[{action: ANSWER, deviceId: [+1555555]}]"
}

```

Call State

Read user state

Fetch a snapshot of the current state of a user.
 Authorizations:

System (Call control) Bearer (Call control)

Path Parameters

domain	string
required	The domain of the organization
userId	string
required	The username of the user accessing the API

GET URL: <https://telo.lab.digitalisland.co.nz/api/call/state/v1/snapshot/{domain}/{userId}>

Response samples

```

{
  "fullState": true,
  "calls": [
    {
      "stateToken": 487345453,

```

```
"callId": "aaa111bbb",
"userId": "alice@organization.org",
"remoteParty": {
  "partyId": "bob@organization.org",
  "type": "USER_ID",
  "telUri": "tel:+46277464",
  "displayName": "Bob Bobson",
  "displayNumber": "7464"
},
"conference": false,
"inbound": false,
"status": "HELD",
"duration": 50,
"deviceIds": [
  "+1555555"
],
"actions": [
  {
    "action": "MOVE"
  },
  {
    "action": "TRANSFER"
  },
  {
    "action": "RESUME"
  },
  {
    "action": "PARK"
  }
]
}
]
```

3rd Party CRM Connector Webhook URL

The **3rd Party CRM Connector Webhook URL** must be using the HTTPS scheme.

Once configured, the MiCloud Telepo sends local and remote party information for every outgoing and incoming call to the CRM system.

Data	Meaning
seq_num	Message number. It is used to track the unique message when multiple responses are sent for the same call.
call_id	Unique call identification
timestamp	The date and time for the outgoing call follow the UTC time zone.
state	The current state of the call. Possible values for this field are: "TRYING", "PROCEEDING", "EARLY", "CONFIRMED" or "TERMINATED".
termination-reason	The reason for termination. Possible values for this field are: "CANCELLED", "ANSWERED_ELSEWHERE", "HANGUP" or "REJECTED".
direction	The direction of the call. This is set to "OUTGOING" or "INCOMING".
local_email	Caller's email address.

Data	Meaning
local_user_id	Caller's user ID.
local_number	Caller's contact number.
device_type	The device from which the call is initiated or received. Possible values are these: "MOBILE", "SOFT", "DESKTOP", "FXS", "EXTERNAL_PBX", "FAX", "VOICEMAIL", "EXTERNAL", "MOBILE_EXT", "CONFERENCE", "QUEUE", "MOBILE_VOIP", "WEB".
remote_email	Callee's email address.
remote_user_id	Callee's user ID.
remote_number	Callee's contact number.

Sample message

The message sent to the CRM Connector URL via HTTP POST requests is in standard JSON format with below contents:

```
{"seq_num":5,"call_id":"8Z7SCgOCRyCewZ6yHmDR3g","branch_id":"2e7e5911","timestamp":"2018-02-02T12:34:57.699+0000","state":"TERMINATED","termination-reason":"REJECTED",  
"direction":"OUTGOING","local_email":"user2@test.com","local_user_id":"user2@test.org","local_number":"+12202","device_type":"SOFT","remote_email":"user1@test.com",  
"remote_user_id":"user1@test.org","remote_number":"+12201"}
```